## REMARKS

### Status of the Claims

In accordance with the foregoing, no claim has been amended, added or canceled. No new matter is being presented, and approval and entry are respectfully requested. Therefore, claims 1, 5-8, 10-12, 16-19, 21 and 22 are pending and under consideration. Reconsideration is respectfully requested.

### REJECTION UNDER 35 U.S.C. § 103

In the outstanding Office Action, claims 1, 5-8, 10-12, 16-19, 21 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Replay Gain (RG, hereafter) in view of Takahiro (JP 02-089252), Kincaid (US 7,072,477 B1) and MP3 CD Maker. The rejection is respectfully traversed.

Independent claim 1 includes a combination of features and is directed to a method for controlling an audio recording level, comprising the steps of a) recording entry audio data in song units and simultaneously decoding the audio data, and detecting an audio level average of the decoded data in song units, and b) variably controlling an audio level of a song to be recorded later on the basis of the detected audio level average, wherein the step b) comprises calculating an offset value between the detected audio level average and an audio level average of a previously recorded song, adjusting an audio level of a subsequent song unit on the basis of the offset value, and encoding and recording the subsequent song unit having the adjusted audio level, and wherein the step (a) determines the audio level average of the decoded data by excluding certain parts of the decoded data having an audio level outside of a prescribed range extending from a maximum audio reference level to a minimum audio reference level and the audio level average of the decoded data is an average value of the decoded data having the prescribed range from the maximum audio reference level to the minimum audio reference level in the song. Independent claims 7, 12 and 18 include similar features in a varying scope.

These features are supported at least by the non-limiting example shown in Figure 2 and described in the corresponding description of the specification. For example, Figure 2 illustrates the audio level average of the decoded data is determined by excluding certain parts of the

decoded data having an audio level outside of a prescribed range extending from a maximum audio reference level (Ref_Max) to a minimum audio reference level (Ref_Min). Thus, the audio level average of the decoded data is an average value of the decoded data having the prescribed range from the maximum audio reference level (Ref_Max) to the minimum audio reference level (Ref_Min) in the song.

As shown in Figures 1 and 2, the audio level detector (16) excludes an audio data level outside of a prescribed range extending from a maximum audio reference level (Ref_Max) to a minimum audio reference level (Ref_Min). In the process of determining the audio level average, the maximum/minimum audio levels Audio_Level_Max/Min (depending on the unique characteristics for each song) are prevented from affecting the overall audio level average of every song. See also paragraph [025] of the present specification. Using the audio data within the prescribed range, the audio level detector (16) determines or calculates the audio level average for that song or the designated song unit. Then, the microcomputer (13) receives and stores the determined audio level average and maximum/minimum audio levels in song units in the memory (17).

In contrast, the cited references including RG, Takahiro, Kincaid and MP3 CD Maker do not teach or suggest that an audio level average of the decoded data is determined by excluding certain parts of the decoded data having an audio level outside of a prescribed range extending from a maximum audio reference level to a minimum audio reference level and the audio level average of the decoded data is an average value of the decoded data having the prescribed range from the maximum audio reference level to the minimum audio reference level in the song.

Kincaid's col.4 line 60 to col. 5, line 23 discloses that "For each audio channel, the weighted sum of the band powers is averaged over the entire track that may be done on the entire source audio stream or the track may be sampled in order to expedite the process. Once the averaged weighted power value has been computed for each channel, the track's overall perceptual power ($P_{power}$) value is defined as:

$$P_{power}=MAX(AWP_L, AWP_R)/PSF_N \qquad \text{eq. (2)}$$

where

$AWP_L$ is defined as Left Average Weighted Power

$AWP_R$ is defined as Right Average Weighted Power

$PSF_N$ is defined as Normalization Power Scale Factor.

In the described embodiment, $AWP_L$ and $AWP_R$ are the averaged weighted power values for each channel, and the $PSF_N$ is an arbitrary scale factor used to map the overall perceptual power to a predefined range such as 0 to approximately $2^{32}$ or more typically 0 to approximately 10,000.

Since the volume gain occurs in the time domain by multiplying waveform amplitude by a gain factor G and since the acoustic power is proportional to the square of waveform amplitude, in order therefore to compute a normalization gain factor $G_N$ from the track's perceptual power value $P_{power}$, the square root of the waveform's perceptual power value $P_{power}$ must be calculated. In addition, because there is an inverse relationship between gain G and power (i.e., the lower the power the higher the gain, and vice versa), the inverse of the square root of the waveform perceptual power value $P_{power}$ is calculated. Therefore, the normalization gain $G_n$ as a function of perceptual power $P_{power}$ is:

$$G_n = 1x(1/P_{power}). \qquad \text{eq. (3)".}$$

Kincaid discloses that the normalization gain factor is applied to the track during playback. The normalization gain factor G is obtained from the track's perceptual power value $P_{power}$ using the equation (3). The track's perceptual power value $P_{power}$ is defined by equation (2).

However, the equation (2) does not teach or suggest an audio level average of the decoded data is determined by excluding certain parts of the decoded data having an audio level outside of a prescribed range extending from a maximum audio reference level to a minimum audio reference level and the audio level average of the decoded data is an average value of the decoded data having the prescribed range from the maximum audio reference level to the minimum audio reference level in the song.

Similar comments apply to the other references by RG, Takahiro, Kincaid or MP3 CD Maker. Accordingly, it is respectfully submitted independent claims 1, 7, 12 and 18 and each of the claims depending therefrom are allowable.

**Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mr. David A. Bilodeau, Reg. No. 42,325 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____

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